

**Notice of Allowability**

Application No.

10/031,893

Applicant(s)

EISEN, ANDREW

Examiner

Art Unit

Richard G Hutson

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to paper filed on 12/12/2003.
2. ☒ The allowed claim(s) is/are 8,10,12,13,16 and 18-23.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 12/2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

Richard G Hutson, Ph.D.  
Primary Examiner  
Art Unit: 1652

**DETAILED ACTION**

Applicants amendment of claim 10 and 12-16 and the addition of claims 20-22 in the paper of 12/12/2003, is acknowledged. Claims 8-22 are still at issue and are present for examination.

Applicants' arguments filed on 12/12/2003, have been fully considered and are deemed to be persuasive to overcome some of the rejections previously applied. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn.

Applicant comments with respect to the previous restriction requirement and a request for rejoinder are acknowledged.

**EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mitchell Bernstein on 3/3/2004.

The application has been amended as follows:

Cancel claims 9, 11, 14, 15 and 17 without prejudice.

Amend the claims as follows:

In claim 10, after "encoded by a nucleic acid that hybridizes" delete "under high stringency hybridization conditions" and after "SEQ ID NO: 3", insert ", wherein said hybridization is achieved by hybridizing in a buffer consisting of 4X SSC, 1X Denhardt, 25 mM NaPO<sub>4</sub>, pH 7, 2 mM EDTA, 0.5% SDS, and 100 µg/ml of sonicated salmon sperm DNA for 12 hours at 65°C, followed by successive washings with: (i) four washings with 2X SSC, 1X Denhardt and 0.5% SDS for 45 minutes at 65°C; (ii) two washings with 0.2X SSC, 0.1% SDS for 45 minutes at 65°C.; and (iii) 0.1X SSC, 0.1% SDS for 45 minutes at 65°C".

In claim 13, after "comprising introducing", delete "DRAP" and insert "the isolated polypeptide of claim 10".

And add"

23. (NEW) The method of claim 13, wherein the isolated polypeptide comprises the amino acid sequence of SEQ ID NO: 4.

The following is an examiner's statement of reasons for allowance: The prior art does not teach or suggest an isolated polypeptide that exhibits recombinase and topoisomerase activities and is encoded by a nucleic acid that hybridizes to SEQ ID NO: 1-3, wherein said hybridization is achieved by hybridizing in a buffer consisting of 4X SSC, 1X Denhardt, 25 mM NaPO<sub>4</sub>, pH 7, 2 mM EDTA, 0.5% SDS, and 100 µg/ml of sonicated salmon sperm for 12 hours at 65°C, followed by successive washings with: (i) four washings with 2X SSC, 1X Denhardt and 0.5% SDS for 45 minutes at 65°C; (ii) two

washings with 0.2X SSC, 0.1% SDS for 45 minutes at 65°C.; and (iii) 0.1X SSC, 0.1% SDS for 45 minutes at 65°C.

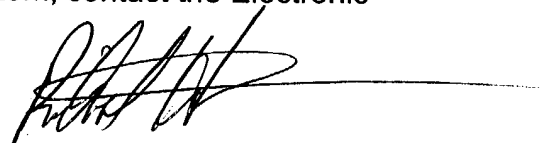
It is noted that the recombinase activity taught by Eisen et al. (Proc. of the Nat. Acad. Sci. USA, Vol 85, pp. 7481-7485, October 1988, See IDS ref 10) is an ATP-independent activity, while that taught by the instant application as SEQ ID NO: 4 exhibits an ATP-dependent recombinase activity.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard G Hutson whose telephone number is (571) 272-0930. The examiner can normally be reached on 7:30 am to 4:00 pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ponnathapu Achutamurthy can be reached on (571) 272-0928. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'R. G. Hutson', with a long horizontal line extending to the right.

Richard G Hutson, Ph.D.  
Primary Examiner  
Art Unit 1652

rg  
3/3/2004